BBA

Bioenergetics
(including Reviews on Bioenergetics)
Vol. 1142, 1993

Cumulative Contents

Information for Contributors vii

Regular Papers

Effects of glycinebetaine and unsaturation of membrane lipids on heat stability of photosynthetic electron-transport and phosphorylation reactions in *Synechocystis* PCC6803
M. Mamedov, H. Hayashi and N. Murata (Japan) 1

Linear dichroism and molecular orientation in Langmuir-Blodgett films of plastoquinones and α-tocopherol quinone
J. Kruk, K. Strzałka and R.M. Leblanc (Poland, Canada) 6

The mechanisms by which mild respiratory chain inhibitors inhibit hepatic gluconeogenesis
M.R. Owen and A.P. Halestrap (UK) 11

Transient EPR spectroscopy of the charge separated state P^+Q^- in photosynthetic reaction centers. Comparison of Zn-substituted *Rhodobacter sphaeroides* R-26 and Photosystem I
G. Füchsle, R. Bittl, A. Van der Est, W. Lubitz and D. Stehlik (Germany) 23

Functional reconstitution of the primary quinone acceptor, Q_A, in the Photosystem II core complexes
C. Araga, K. Akabori, J. Sasaki, A. Maeda, T. Shiina and Y. Toyoshima (Japan) 36

Possible photoacoustic detection of cyclic electron transport around Photosystem II in photoinhibited thylakoid preparations
L. Lapointe, N.P.A. Huner, R.M. Leblanc and R. Carpentier (Canada) 43

Excitation transfer and charge separation kinetics in purple bacteria. (1) Picosecond fluorescence of chromatophores from *Rhodobacter capsulatus* wild type
M.G. Müller, G. Drews and A.R. Holzwarth (Germany) 49

Photoinhibition and recovery in relation to heterogeneity of Photosystem II
K.J. Van Wijk, B. Schnettger, M. Graf and G.H. Krause (Netherlands, Germany) 59

Electron transfer in menaquinone-depleted membranes of *Heliobacterium chlorum*
F.A.M. Kleinherenbrink, I. Ikegami, A. Hiraishi, S.C.M. Otte and J. Amesz (The Netherlands, Japan) 69

Inactivation of phenobarbital-inducible rabbit-liver microsomal cytochrome *P*-450 by allylisopropylacetamide: impact on electron transfer
I. Golly and P. Hlavica (Germany) 74

Comparison between the properties of 3-nitrosalicyl-*N*-alkylamide and antimycin A acting on QH_2:cytochrome *c* reductase
J.-x. Xu, Y. Xiao, Y.-h. Wang, X. Li and L.-q. Gu (China) 83

Inhibition of the plasma-membrane H^+-ATPase from *Dunaliella adidophila* by omeprazole
I. Sekler, D. Remis, H. Gimmler and U. Pick (Israel, Germany) 88

Molecular modeling studies on the proposed NaCl-induced dimerization of *Chromatium vinosum* high-potential iron protein
E.T. Adman, M.W. Mather and J.A. Fee (USA) 93

Subpicosecond emission studies of bacterial reaction centers
P. Hamm, K.A. Gray, D. Oesterhelt, R. Feick, H. Scheer and W. Zinth (Germany) 99

Modeling and energy minimization studies on the herbicide binding protein (D1) in Photosystem II of plants
U. Egner, G.-A. Hoyer and W. Saenger (Germany) 106

Photoinhibition of photosynthesis in vivo: Involvement of multiple sites in a photodamage process under CO_2- and O_2-free conditions
H. Gong, S. Nilsen and J.F. Allen (Norway, Sweden) 115

Influence of different uncouplers on Photosystem II photochemistry and fluorescence
G. Finazzi, A.M. Ehrenheim and G. Forti (Italy) 123

Studies on the recombination kinetics of the radical pair $P680^+Pheo^-$ in isolated PS II core complexes from spinach
B. Liu, A. Napiwotzki, H.-J. Eckert, H.J. Eichler and G. Renger (Germany) 129

Reaction mechanism of the reconstituted tricarboxylate carrier from rat liver mitochondria
F. Bisaccia, A. De Palma, T. Dierks, R. Krämer and F. Palmieri (Italy, Germany) 139

Temperature dependence of the light-induced infrared difference spectra of chromatophores

and reaction centers from photosynthetic bacteria
E.H. Morita, H. Hayashi and M. Tasumi (Japan) 146
Two coupled β-carotene molecules protect P680 from photodamage in isolated Photosystem II reaction centres
J. De Las Rivas, A. Telfer and J. Barber (UK) 155
A kinetic model for the regulation of electron transfer through the cyanide-resistant pathway in plant mitochondria
J.N. Siedow and A.L. Moore (USA, UK) 165
The function of ATP/ADP translocator in the regulation of mitochondrial respiration during development of heart ischemic injury
V. Borutaité, V. Mildažiene, Z. Katiliūté, B. Kholodenko and A. Toleikis (Lithuania, Russia) 175
Structural characterization of the B800–850 and B875 light-harvesting antenna complexes from *Rhodobacter sphaeroides* by electron microscopy
A.F. Boonstra, R.W. Visschers, F. Calkoen, R. Van Grondelle, E.F.J. Van Bruggen and E.J. Boekema (The Netherlands) 181
Characterization of trimeric Photosystem I particles from the prochlorophyte *Prochlorothrix hollandica* by electron microscopy and image analysis
G.W.M. Van der Staay, E.J. Boekema, J.P. Dekker and H.C.P. Matthijs (Netherlands) 189
Motional dynamics of functional cytochrome *c* delivered by low pH fusion into the intermembrane space of intact mitochondria
J.D. Cortese and C.R. Hackenbrock (USA) 194

Rapid Reports

ΔpH-dependent quenching of the F_o level of chlorophyll fluorescence in spinach leaves
P. Horton and A.V. Ruban (UK) 203
Free-radical and correlated radical-pair spin-polarized signals in *Rhodobacter sphaeroides* R-26 reaction centers
I.I. Proskuryakov, I.B. Klenina, A.Y. Shkuropatov, V.A. Shkuropatova and V.A. Shuvalov (Russia) 207
Bacteriorhodopsin immobilized in sol-gel glass
H.H. Weetall, B. Robertson, D. Cullin, J. Brown and M. Walch (USA) 211
Flash-induced electric potential generation in wild type and L212EQ mutant chromatophores of *Rhodobacter sphaeroides*: Q_BH_2 is not released from L212EQ mutant reaction centers
V.P. Shinkarev, E. Takahashi and C.A. Wraight (USA) 214

Regular Papers

Effect of macromolecules on the regulation of the mitochondrial outer membrane pore and the activity of adenylate kinase in the inter-membrane space
F.N. Gellerich, M. Wagner, M. Kapischke, U. Wicker and D. Brdiczka (Germany) 217
Effect of macromolecules on the structure of the mitochondrial inter-membrane space and the regulation of hexokinase
U. Wicker, K. Bücheler, F.N. Gellerich, M. Wagner, M. Kapischke and D. Brdiczka (Germany) 228
X-ray absorption spectroscopy of oriented cytochrome oxidase
G.N. George, S.P. Cramer, T.G. Frey and R.C. Prince (USA) 240
The reaction of reduced cytochromes *c* with nitrous oxide reductase of *Wolinella succinogenes*
C.-s. Zhang and T.C. Hollocher (USA) 253
Inhibition of electron transport of rat-liver mitochondria by synthesized antimycin A analogs
N. Tokutake, H. Miyoshi, H. Nakazato and H. Iwamura (Japan) 262
Application of thermostable reaction centers from *Chloroflexus aurantiacus* as a protonmotive force generating system
G. Speelmans, D. Hillenga, B. Poolman and W.N. Konings (Netherlands) 269
Thylakoid lumenal pH determination using a fluorescent dye: correlation of lumen pH and gating between localized and delocalized energy coupling
M. Renganathan, E. Pfündel and R.A. Dilley (USA) 277
Primary structure, deduced from cDNA, secondary structure analysis and conclusions concerning interaction surfaces of the δ subunit of the photosynthetic ATP-synthase (E.C. 3.6.1.34) from millet (*Sorghum bicolor*) and maize (*Zea mays*)
J.A. Hoesche and R.J. Berzborn (Germany) 293
The two high molecular weight subunits of cytochrome *c* reductase from potato are immunologically related to the mitochondrial processing enhancing protein
M. Emmermann, H.-P. Braun and U.K. Schmitz (Germany) 306
Energy transfer dynamics of an isolated light harvesting complex of Photosystem I from spinach: time-resolved fluorescence measurements at 295 K and 77 K
I. Mukerji and K. Sauer (USA) 311

The role of protonic and sodium potentials in the motility of *E. coli* and *Bacillus FTU*
A.V. Bogachev, R.A. Murtasina, A.I. Shestopalov and V.P. Skulachev (Russia) 321

Identification of an exchangeable non-catalytic site on mitochondrial F_1-ATPase which is involved in the negative cooperativity of ATP hydrolysis
C.M. Edel, A.F. Hartog and J.A. Berden (The Netherlands) 327

Cumulative Contents, Vol. 1142 337

Author Index 340